Federal Funding Opportunity
National Institute of Standards and Technology
Fiscal Year (FY) 2010 Measurement Science and Engineering Research Grants Programs

Overview Information

1. Federal Agency Name(s): Department of Commerce, National Institute of Standards and Technology (NIST)

2. Funding Opportunity Title: Measurement Science and Engineering (MSE) Research Grants Programs for: (1) Electronics and Electrical Engineering Laboratory (EEEL); (2) the Manufacturing Engineering Laboratory (MEL); (3) the Chemical Science and Technology Laboratory (CSTL); (4) the Physics Laboratory; (5) the Materials Science and Engineering Laboratory (MSEL); (6) the Building Research Grants and Cooperative Agreements Program; (7) the Fire Research Program; (8) the Information Technology Laboratory (ITL) Program; (9) the NIST Center for Neutron Research (NCNR); and (10) Center for Nanoscale Science and Technology (CNST); and (11) Technology Services (TS).

3. Announcement Type: Initial Announcement

4. Funding Opportunity Number: 2010-MSE-01

5. Catalog of Federal Domestic Assistance (CFDA) Number(s): 11.609

6. Dates: For all programs listed in this notice applications will be considered on a continuing basis. For all programs except the *Fire Research Grants Program*, applications received after June 1, 2010 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. For the *Fire Research Grants Program*, applications received after January 15, 2010 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2011 solicitation for the NIST MSE Research Grants Programs in order to be processed under this solicitation.
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Executive summary: The National Institute of Standards and Technology (NIST) announces that the following programs are soliciting applications for financial assistance for FY 2010: (1) the Electronics and Electrical Engineering Laboratory Grants Program; (2) the Manufacturing Engineering Laboratory Grants Program; (3) the Chemical Science and Technology Laboratory Grants Program; (4) the Physics Laboratory Grants Program; (5) the Materials Science and Engineering Laboratory Grants Program; (6) the Building Research Grants and Cooperative Agreements Program; (7) the Fire Research Grants Program; (8) the Information Technology Laboratory Grants Program; (9) the NIST Center for Neutron Research Grants Program; and (10) Center for Nanoscale Science and Technology Grants Program; and (11) the Technology Services Grants Program.

Full Text of Announcement

a. Funding Opportunity Description:

Electronics and Electrical Engineering Laboratory (EEEL) Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: The *Electronics and Electrical Engineering Laboratory (EEEL) Grants Program* will provide grants and cooperative agreements for the development of fundamental electrical metrology and of metrology supporting industry and government agencies in the broad areas of semiconductors, electronic instrumentation, radio-frequency technology, optoelectronics, magnetics, superconductors, electronic commerce as applied to electronic products and devices, the transmission and distribution of electrical power, national electrical standards (fundamental, generally quantum-based physical standards), and law enforcement standards. Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the mission of the Electronics and Electrical Engineering Laboratory.

All proposals submitted to the Electronics and Electrical Engineering Laboratory Grants Program must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives. For additional details on EEEL research activities, please see the Electronics and Electrical Engineering Laboratory Web site at http://www.eeel.nist.gov.

A. Semiconductor Electronics Division—The primary objective is to collaborate with or to conduct research consistent with EEEL Laboratory programs in the areas of silicon CMOS (complementary metal-oxide semiconductor) technology, MicroElectroMechanical Systems (MEMS), power electronics, nanoelectronics, nanobiotechnology, and electronic commerce. The contact person for this Division is Dr. David Seiler, and he may be reached at (301) 975–2054; david.seiler@nist.gov.

B. Office of Microelectronics Programs—The primary objective is to collaborate with or to conduct research consistent with NIST Laboratory programs in the areas of silicon CMOS (complementary metal-oxide semiconductor) and beyond-CMOS technologies aligned with semiconductor industry needs as expressed, for example, in the current International Technology Roadmap for Semiconductors (ITRS). The contact person for this Office is Dr. Jack Martinez and he may be reached at (301) 975–4400; jack.martinez@nist.gov.

C. Electromagnetics Division—The primary objective is to collaborate with or to conduct research consistent with EEEL Laboratory programs in the areas of radio-frequency and microwave technology, electromagnetic fields, magnetics and superconductors (bulk). The contact person for this Division is Dr. Perry Wilson and he may be reached at (303) 497–3406; perry.wilson@nist.gov.

D. Quantum Electrical Metrology Division—The primary objective is to collaborate with or to conduct research consistent with EEEL Laboratory programs in the areas of national electrical standards (fundamental, generally quantum-based physical standards), electronic instrumentation, and superconductors (cryoelectronics). The contact person for this Division Dr. Michael Kelley and he may be reached at (303) 497-4736;michael.kelley@nist.gov.

E. Optoelectronics Division—The primary objective is to collaborate with or to conduct research consistent with EEEL Laboratory programs in the area of optoelectronics. The contact person for this Division is Dr. Robert Hickernell and he may be reached at (303) 497–3455; robert.hickernell@nist.gov.

F. Office of Law Enforcement Standards—The primary objective is to collaborate with or to conduct research consistent with OLES programs supporting law enforcement and (more broadly) first responder standards, including the areas of Weapons and Protective Systems; Detection, Inspection, and Enforcement Technologies; Chemical Systems and Materials; Forensic Sciences; Public Safety Communication Standards; and Critical Incident Technologies. The contact person for this Office is Mr. Mark Stolorow and he may be reached at (301) 975–2754; mark.stolorow@nist.gov.

Manufacturing Engineering Laboratory (MEL) Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Manufacturing Engineering Laboratory (MEL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Dimensional Metrology for Manufacturing, Mechanical Metrology for Manufacturing, Machine Tool and Machining Process Metrology, Intelligent Systems, and Information Systems Integration for Applications in Manufacturing. Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the mission of the Manufacturing Engineering Laboratory.

All proposals submitted must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Precision Engineering Division, 821--The primary objective is to collaborate with or conduct research consistent with NIST laboratory programs in the areas of Engineering Metrology, Large-Scale Metrology, Nanometer-Scale Metrology including nano-manufacturing, and Surface Metrology. The contact person for this division is Michael Postek, (301) 975-2299, michael.postek@nist.gov.

B. Manufacturing Metrology Division, 822--The primary objective is to collaborate with or conduct research consistent with NIST laboratory programs and research in Mechanical Metrology (Mass, Force, Acoustics, and Vibration); Optics Metrology; Machine Tool and Machining Process Metrology; Smart Machining Systems; and Sensor Networking and Integration. The contact person for this division is Kevin Jurrens, (301) 975-6600; kevin.jurrens@nist.gov.

C. Intelligent Systems Division, 823 – The primary objective is to collaborate with or conduct research consistent with NIST laboratory programs and research in Manufacturing Process and Equipment Interoperability, Industrial Control System Security, Intelligent Systems and Robotics, and Intelligent Control of Mobility Systems. The contact person for this division is Albert Wavering, (301) 975-3418; albert.wavering@nist.gov.

D. Manufacturing Systems Integration Division, 826--The primary objective is to pursue semantics- and ontology-based

systems integration technology and standards through collaboration with NIST laboratory programs in Manufacturing Interoperability, covering enterprise integration, e-commerce, supply chain integration, product and process engineering, manufacturing simulation and visualization; and Homeland Defense and Emergency Response, specifically simulation integration. The contact person for this division is Sharon Kemmerer, (301) 975-3287; sharon.kemmerer@nist.gov.

Chemical Science and Technology Laboratory Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Chemical Science and Technology Laboratory (CSTL) Grants Program* will provide grants and cooperative agreements consistent with the CSTL mission in the following fields of measurement science research, focused on reference methods, reference materials and reference data: Biochemical Science, Chemical and Biochemical Reference Data, Process Measurements, Surface and Microanalysis Science, Thermophysical Properties, and Analytical Chemistry. Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the mission of the Chemical Science and Technology Laboratory.

CSTL is the United States' reference laboratory for chemical measurements, entrusted with developing, maintaining, advancing, and enabling the chemical measurement system for the nation. Today, CSTL has the most comprehensive array of chemical, physical, and engineering measurement capabilities of any group working in chemical science and technology. Our broad customer base includes established industrial sectors and emerging industries, government agencies, standards and trade organizations, and the academic and scientific communities. CSTL is recognized as the world's leading chemical metrology laboratory, and our technical excellence, broad range of capabilities, and flexibility have served us well towards responding to the changing needs of the nation.

The Programs are structured to support CSTL's three objectives:

- Provide the national traceability and international comparability structure for measurements in chemistry, chemical engineering, and biochemical sciences.
- Assure that U.S. industry has access to accurate and reliable data and predictive models to determine the chemical and physical properties of materials and processes;
- Anticipate and address next-generation measurement needs of the Nation.

The appropriate Division Chief for each field of research described in this section may be contacted for clarification of the program objectives. Additional information about the Divisions and CSTL Programs may be obtained at the following Web site: http://www.nist.gov/cstl.

CSTL conducts its research and is organized along disciplinary lines:

A. Biochemical Science Division: DNA chemistry, sequencing; Protein structure, properties, and modeling; Biomaterials; Biocatalysis and bioprocessing measurements. The contact person for this division is Dr. Laurie Locascio, and she may be reached at, (301) 975-2129.

B. Chemical and Biochemical Reference Data: Basic reference data; Data for process and product design; Combustion and kinetics; and Computational chemistry. The contact person for this division is Dr. Carlos Gonzalez, and he may be reached at (301) 975-2483.

C. Process Measurements Division: Research, calibration services and provision of primary standards for temperature, pressure, vacuum, humidity, fluid flow, air speed, liquid density and volume, and gaseous leak-rate measurements; Sensor research. The contact person for this division is: Dr.Michael Muldover, and he may be reached at (301) 975-2600.

D. Surface and Microanalysis Science Division: Nanoscale chemical characterization; Particle characterization and standards; Electronic and advanced materials characterization; Surface and interface chemistry; Advanced isotope metrology. The contact person for this division is: Dr. John Small, and he may be reached at (301) 975-3914.

E. Thermophysical Properties Division: Properties of energy-related fluids; Fundamental studies of fluids; Cryogenic technologies. The contact person for this division is Dr. Daniel Friend, and he may be reached at (303) 497- 5424.

F. Analytical Chemistry Division: Chemical measurements research and services in: Analytical sensing technologies; Classical analytical methods; Gas metrology; Nuclear analytical methods; Organic analytical methods; and Spectrochemical

measurement methods. The contact person for this division is: Dr. Stephen Wise, and he may be reached at (301) 975-3108.

Physics Laboratory Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Physics Laboratory (PL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Electron and Optical Physics, Atomic Physics, Optical Technology, Ionizing Radiation, Time and Frequency, and Quantum Physics.

All proposals submitted to the Physics Laboratory Grants Program must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Physics Laboratory Office, 840 – Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the mission of the Physics Laboratory. Support is generally provided in increments of $5,000 per award.

B. Electron and Optical Physics Division, 841--The primary objective is to collaborate or conduct research consistent with the division activities in far ultraviolet radiometric metrology, the characterization of EUV optical devices used in semiconductor lithography and remote sensing applications, and Bose-Einstein condensation and quantum information. The contact person for this division is Dr. Charles W. Clark and he may be reached at (301) 975-3709.

C. Atomic Physics Division, 842--The primary objective is to collaborate or conduct research consistent with division programs aimed at determining basic atomic properties and developing new metrology techniques in atomic spectroscopy, make precision measurements related to atomic spectroscopy, support research efforts in fundamental quantum processes including nanophotonics and cold atom physics including Bose-Einstein condensation and Fermi degenerate gases, and conduct research in the areas of quantum information science, laser cooling and trapping, and quantum metrology. The contact person for this division is Dr. Carl J. Williams and he may be reached at (301) 975-3200.

D. Optical Technology Division, 844--The primary objective is to develop, improve, and maintain national standards for radiation thermometry, spectroradiometry, photometry, and spectrophotometry and to conduct basic theoretical and experimental research on the photophysical and photochemical properties of materials and biomolecular systems, on radiometric and spectroscopic techniques and instrumentation, and on the application of optical technologies. The contact person for this division is Dr. Gerald T. Fraser and he may be reached at (301) 975-2316.

E. Ionizing Radiation Division, 846--The primary objective is to provide primary standards, measurement methods, and technology to collaborate or conduct research consistent with the Division's work in meeting national needs in radiation interactions and dosimetry, neutron interactions and dosimetry, and radioactivity, including both theoretical/experimental and applied research programs in support of industry, health care, and homeland security. The contact person for this division is Dr. Lisa R. Karam and she may be reached at (301) 975-5561.

F. Time and Frequency Division, 847--The primary objective is to collaborate or conduct research consistent with the divisions basic and applied research programs in the areas of time and frequency standards, phase noise measurements, network synchronization, ion storage, quantum information, atomic standards and optical frequency measurements in support of future standards, chip-scale atomic clocks and related devices, time and frequency dissemination services, support of time and frequency applications such as navigational systems and telecommunications, and measurement methods. The contact person for this division is Dr. Thomas R. O'Brian and he may be reached at (303) 497-4570.

Materials Science and Engineering Laboratory Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Materials Science and Engineering Laboratory (MSEL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Ceramics; Metallurgy; Polymers; and Materials Reliability.

All proposals submitted to the MSEL Grants Program must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives. Financial support may also be provided for conferences, workshops, or other technical research meetings that are relevant to

the mission of the Materials Science and Engineering Laboratory. Support is generally provided in increments of $2,000 to 5,000 per award.

A. Laboratory Office, 850--The primary objective is to collaborate with or conduct research consistent with the Materials Science and Engineering Laboratory activities of importance to materials science generally, including portions of Federal research and development programs performed in concert with other Federal agencies; and theoretical and computational materials science.

B. Ceramics Division, 852--The primary objective is to collaborate with or conduct research consistent with the division projects in nanomechanical properties, functional properties, structure determination methods, and synchrotron methods through the development of measurement instrumentation, methods, standards, and comprehensive databases. The contact person for this division is: Dr. Douglas Smith and he may be reached at (301) 975-5768 or by e-mail at douglas.smith@nist.gov.

C. Materials Reliability Division, 853--The primary objective is to collaborate with or conduct research consistent with the division activities in the metrology of microelectronic and optoelectronic structures, thin films and nanostructures, and biomaterials. The contact person for this division is: Dr. Thomas Siewert and he may be reached at (303) 497-3523 or by e-mail at siewert@boulder.nist.gov.

D. Polymers Division, 854--The primary objective is to collaborate with or conduct research consistent with the division programs in sustainable polymers, polymers for energy and electronics, biomaterials, and complex fluids through participation in research on metrology, synthesis, processing and characterization of structure, mechanical, thermal and electrical properties. The contact person for this division is: Dr. Kalman Migler and he may be reached at (301) 975-4876 or by e-mail at kalman.migler@nist.gov.

E. Metallurgy Division, 855--The primary objective is to collaborate with or conduct research consistent with division programs in magnetic materials, computational materials science, mechanics of materials, nanostructured materials and processing, and electronic materials. The contact person for this division is: Dr. Daniel Josell and he may be reached at (301) 975-5788 or by e-mail at daniel.josell@nist.gov..

Building Research Grants and Cooperative Agreements Program

Authority: 15 U.S.C. § 272(b) and (c) and 42 U.S.C. § 7704

Program Description: *The Building Research Grants and Cooperative Agreements Program* will provide grants and cooperative agreements in the following fields of research: Structures, Construction Metrology and Automation, Inorganic Materials, Polymeric Materials, HVAC & R Equipment Performance, Mechanical Systems and Controls, Heat Transfer and Alternative Energy Systems, Computer Integrated Building Processes, Indoor Air Quality and Ventilation, the National Earthquake Hazard Reduction Program, and Building Economics. Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the mission of the Building and Fire Research Laboratory.

The *Building Research Grants and Cooperative Agreements Program* supports the formal mission of the Building and Fire Research Laboratory, which is to promote U.S. innovation and competitiveness by anticipating and meeting the measurement science, standards, and technology needs of the U.S. building and fire safety industries in ways that enhance economic security and improve the quality of life. All proposals submitted must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Materials and Construction Research Division, 861--The primary objective is to collaborate with or conduct research consistent with the laboratory programs in the areas of Structures, Construction Metrology and Automation, Inorganic Materials, and Polymeric Materials (including safety, security, and sustainability of building and physical infrastructure, service-life performance of building materials, and construction cycle time reductions). The contact person for this division is: Dr. Jonathan Martin who can be reached at 301-975-6717.

B. Building Environment Division, 863--The primary objective is to collaborate with or conduct research consistent with the laboratory programs in areas related to measurement science needed to enable Net Zero High Performance Green Buildings. The breadth of this area includes measurement science associated with the building envelope, HVAC equipment, renewable energy systems, building controls/building automation systems, and equipment used to achieve acceptable indoor air quality. In particular grants are sought that would:

- Enable building energy-use reduction through in-situ performance measurements.
  Measurement systems are required that can provide detailed, ongoing information on how energy is being used within a building, thus encouraging owners/occupants to make informed energy use decisions. Non-destructive measurement systems are also needed to identify construction defects, such as insulation voids, and identify performance degradations in equipment such as heating and cooling systems.
- Enable energy-use reduction through embedded intelligence in building controls.
  The key to realizing design potentials is combining new measurement technology and performance metrics with analysis techniques that can be implemented in building automation and control products. The resulting systems have a distributed, embedded intelligence that can detect and respond to faults and operational errors and inefficiencies.
- Provide measurement science for emerging building technologies.
  Potential users of building energy technologies require actual, as opposed to advertised or rated performance measures and data before making capital investments. Credible performance measures and data will create market demand for emerging building energy technologies, economies of scale, and reduced cost.
- Develop carbon footprint metrics/tools for building sustainability evaluation.
  Next-generation metrics and tools enabling rigorous carbon footprint assessment over the building service life are needed to link green building technology innovation to environmental/economic benefits.

Collaborations are also sought in the areas of information representation and exchange; computer integrated building processes and services. The contact person for this division is: Dr. A. Hunter Fanney, who can be reached at 301- 975-5864. For details on these various activities, please see the Building and Fire Research Laboratory Web site at http://www.bfrl.nist.gov. Note that documents describing the current programs for the two technical divisions are available through the homepage.

C. The Office of Applied Economics supports technology deployment to government agencies and construction and fire-related industries. It provides standardized methods, economic models, training programs and materials and expert technical consulting in support of resource allocation decisions and uses techniques such as benefit-cost analysis, life-cycle costing, multi-criteria decision analysis and econometrics to evaluate new technologies. The contact person for this group is: Robert Chapman who can be reached at 301-975-2723.

D. The National Earthquake Hazards Reduction Program (NEHRP) Office – The primary research objective is to conduct applied, problem-focused research through a combination of intramural and collaborative extramural programs to improve U.S. seismic design and construction practices. Areas of emphasis include developing the technical basis for performance-based seismic engineering (PBSE); providing technical support for the earthquake engineering practice and associated model building code development; developing technical resources, tools, and guidelines that improve earthquake engineering practice; disseminating information on earthquake engineering technologies to earthquake practitioners; and developing tools that enhance the productivity of earthquake engineering design and construction productivity, economy, and effectiveness. Research needs references may be found at http://www.nehrp.gov/library/researchneeds.htm . The NEHRP contact person is Dr. John R. Hayes, Jr, who can be reached at 301-975-5640 or jack.hayes@nist.gov . http://www.nehrp.gov/library/researchneeds.htm

Fire Research Grants Program

Authority: 15 U.S.C. § 278f

Program Description: *The Fire Research Grants Program* will provide funding through grants and cooperative agreements to support the conduct of research or a recipient's portion of collaborative research in areas of current interest to the Building and Fire Research Laboratory. For details on current fire research activities, please see the Building and Fire Research Laboratory web site at http://www.bfrl.nist.gov. Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the objectives of the Fire Research Grants Program.

The program description and objectives for the *Fire Research Grants Program* are as follows:

A. Fire Modeling Group: Develops and maintains advanced, validated numerical models to predict fire behavior with qualified accuracy. The Group develops models to simulate the spread, growth, suppression, and emission from fires in buildings and wildland-urban interface communities. The contact person for this group is: Dr. Kevin McGrattan, who can be reached at (301) 975-2712.

B. Fire Measurements Group: Develops and applies measurement science to improve the understanding of fire phenomena

including fire growth, fire-induced flow, heat transfer, smoke and species formation and transport, and fire suppression. The Group supports the development of innovative measurement and test methods, improved codes and standards, and fire model validation. The contact person for this group is: Dr. Jiann Yang, who can be reached at (301) 975-6662.

C. Fire Fighting Technology Group: Develops and applies measurement science to improve the understanding of the behavior, prevention, and control of fires. The Group enhances fire fighting operations, enables new technology to be integrated into fire fighting equipment, and supports fire investigations, fire reconstructions, and disaster response. The contact person for this group is: Dr. Francine Amon, who can be reached at (301) 975-1913.

D. Materials Flammability Group: Develops and applies measurement science to further the scientific understanding of material flammability. The Group enables the development of innovative materials through improved test methods and validated models of material flammability for application in the build environment. The contact person for this group is: Dr. Jeffrey Gilman, who can be reached at (301) 975-6573.

E. Engineered Fire Safety Group: Develops and applies measurement science to support cost-effective fire protection and risk-informed life safety decisions by the design, construction, and regulatory communities. Integrates the knowledge and tools necessary to assess building performance with respect to ignition, detection, suppression, toxicity, and egress in performance-based and prescriptive regulatory regimes. The contact person for this group is Mr. Jason Averill, who can be reached at (301) 975-2585.

Information Technology Laboratory Grants Program

Authority: 15 U.S.C. § 272(b) and (c) and 42 U.S.C. § 15361(e)

Program Description: *The Information Technology Laboratory Grants Program* will provide grants and cooperative agreements in the broad areas of mathematical and computational sciences, advanced network technologies, information access, and software testing. Specific objectives of interest in these areas of research include: quantum information theory, computational materials science, network science, mathematical foundations of measurement science for information systems, mathematical knowledge management, visual data analysis, verification and validation of computer models, computational biology, semantic data integration, software testing, biometrics, human language technology, interactive systems, multimedia technology, human factors/security/core requirements/testing of voting systems, information visualization, systems biology, grid computing, service oriented architecture and complex systems, security for the IPv6 transition from and coexistence with IPv4, and device mobility among heterogeneous networks. For details on these various activities, please see the Information Technology Laboratory web site at http://www.itl.nist.gov. Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the mission of the Information Technology Laboratory.

Contact the *Information Technology Laboratory Grant Program Manager:* Kamie Roberts, (301) 975-2901, kroberts@nist.gov for clarification of the program objectives.

NIST Center for Neutron Research Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The NIST Center for Neutron Research (NCNR) Grants Program* will provide grants and cooperative agreements for research involving neutron scattering and the development of innovative technologies that advance the state-of-the-art in neutron research. Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the mission of the NIST Center for Neutron Research..

All proposals submitted to the NCNR Grants Program must be in accordance with the program objectives. These are to create novel approaches to advance high resolution cold and thermal neutron scattering research; to develop new applications of neutron scattering to physics, chemistry, and macromolecular and materials research; and to support the development of innovative technologies relevant to neutron research, including, for example, high resolution two-dimensional neutron detectors, neutron monochromators, and neutron focusing and polarizing devices. Awards to universities to help to promote research by university students at the NIST/NSF Center for High Resolution Scattering are also funded under this program. Dr. Dan Neumann should be contacted for any inquiries about the objectives for this NCNR program. He can be reached at (301) 975-5252 or by e-mail at dan.neumann@nist.gov.

Center for Nanoscale Science and Technology Grants and Cooperative Agreements Program

Authority: 15 U.S.C. § 272(b) and (c) and 15 U.S.C. § 7501 *et seq.*

Program Description: *The Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program* will offer financial assistance in the field of nanotechnology specifically aimed at developing essential measurement and fabrication methods, standards, and technology in support of all phases of nanotechnology development, from discovery to production; conducting collaborative research with NIST scientists, including research at the CNST NanoFab, a national shared-use facility for nanofabrication and measurement; and supporting researchers visiting the CNST. Financial support may be provided for conferences, workshops, or other technical research meetings, or fellowships that are relevant to the mission of the CNST. In proposals for fellowships, applicants and team members must possess the education, experience, and training to effectively pursue and advance the proposed field of research. In addition, the applicant and team members must possess a demonstrated record of excellence in the proposed field of research. In some cases one or more scientific staff members, including undergraduate or graduate students, may be stationed at NIST in order to work in collaboration with NIST and other visiting scientists.

The primary program objectives of the financial assistance program in the CNST are to develop new measurement and fabrication methods, instrumentation, and standards for nanotechnology; and to explore a variety of new areas of nanoscale science and technology. Broad areas of interest include post-complementary metal oxide semiconductor electronics; nanofabrication and nanomanufacturing; energy transport, storage, and conversion; and bionanotechnology. Specific areas of interest include atomic-scale characterization and manipulation; scanning and transmission electron microscopy; focused ion beams; laser-atom manipulation; nanophotonic; nanoplasmonics; optical micro- and nanoelectromechanical systems (MEMS and NEMS) ; nanomagnetic imaging and dynamics; nanolithography; nanofabrication process development; directed self-assembly; nanoscale properties of soft matter; nanoscale stochastic processes; nanoscale control theory; nanoscale electronic and ionic transport; light-matter interaction, charge and energy transfer processes, catalytic activity, and interfacial structure in energy-related devices (including photovoltaics, thermoelectric, photoanodes, fuel cells, batteries, supercapacitors, and field emitters); nanobiosensors; nanofluidics; nanomedicine; and theory, modeling, and simulation of nanostructures. Additional objectives of this program are to assist and train CNST collaborators and NanoFab users in their research; and to conduct other outreach and educational activities that advance the development of nanotechnology by U.S. university and industrial scientists. These objectives will entail collaborative research among the selected financial assistance recipients and the CNST research staff.

Technology Services (TS) Grants Program

Authority: 15 U.S.C. § 272(b) and (c), 15 U.S.C. § 272a

Program Description: *The Technology Services Grants Program* will provide grants and cooperative agreements in the broad areas of documentary standards and legal metrology. Specific objectives of interest in these areas include: evaluation of the impact of documentary standards on U.S. competitiveness and innovation as well as on topics related to health, safety and the environment as well as support for specific standards related activities, including development of web-based information systems. Support for legal metrology will include grants to the states for: purchase of specialized equipment required to conduct inspections and tests; purchase of specialized metrology laboratory equipment; purchase of software/hardware needed to collect data of inspection records/results; and conducting training schools for weights and measures field inspectors. For details on these various activities, please see the Technology Services web site at http://www.ts.nist.gov. Financial support may be provided for conferences, workshops, or other technical research meetings that are relevant to the mission of Technology Services.

b. Award Information:

The funding instruments used in these programs will be grants and cooperative agreements, as appropriate. Where cooperative agreements are used, the nature of NIST's "substantial involvement" will generally be collaboration with the recipient by working jointly with a recipient scientist in carrying out the scope of work, or specifying direction or redirection of the scope of work due to inter-relationships with other projects requiring such cooperation.

When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the individual MSE Grants Program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves.)

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, proposals will be considered for research projects from one to three years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

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In fiscal year 2009, the *EEEL Grants Program* made 5 new awards, totaling $388,383. The amount available each year fluctuates considerably based on programmatic needs and funding availability. For FY 2010 individual awards are expected to range between $5,000 and $150,000.

Manufacturing Engineering Laboratory Grants Program

For the *MEL Grants Program*, proposals will be considered for research projects from one to five years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with the award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the MEL Grants Program, and the availability of funds. Multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2009, the *MEL Grants Program* funded six new awards totaling, $473,613. In fiscal year 2010 individual awards are expected to range from approximately $25,000 to $250,000.

Chemical Science and Technology Laboratory Grant Program

For the *Chemical Science and Technology Laboratory Grant Program*, proposals will be considered for research projects from one to three years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

No funds have been set aside specifically for the *CSTL Grants Program*. The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by individual divisions within the laboratory. Where funds are identified as available for grants, those funds will be awarded to highly ranked proposals as determined by the process described in this notice.

In fiscal year 2009, the *CSTL Grants Program* funded 7 new awards, totaling $1,688,939. In fiscal year 2010, the *CSTL Grants Program* anticipates funding of approximately $1,000,000. For FY 2010 individual awards are expected to range from approximately $5,000 to $200,000.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, proposals will be considered for research projects from one to five years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

In fiscal year 2009, the *PL Grants Program* funded 21 new awards, totaling $2,566,192. In fiscal year 2010, the *PL Grants Program* anticipates funding of approximately $2,000,000, including new awards and continuing projects. Funding availability will be apportioned by quarter. For FY 2010 individual awards are expected to range from approximately $5,000 to $500,000 per year.

Materials Science and Engineering Laboratory Grants Program

For the *MSEL Grants Program*, proposals will be considered for research projects from one to five years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

In fiscal year 2009, the *MSEL Grants Program* funded 19 new awards, totaling $2,496,714. In fiscal year 2010, the *MSEL Grants Program* anticipates funding of approximately $4,600,000, including new awards and continuing projects. For FY 2010 most grants and cooperative agreements are expected to be in the $2,000 to $500,000 per year range.

Building Research Grants and Cooperative Agreements Program

For the *Building Research Grants and Cooperative Agreements Program*, proposals will be considered for research projects from one to three years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

In fiscal year 2009, the *Building Research Grants and Cooperative Agreements Program* funded 18 new awards, totaling $1,953,509. No funds have been set aside specifically for the *Building Research Grants and Cooperative Agreements Program*. The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by the individual divisions. The amount available each year fluctuates considerably based on programmatic needs. For FY 2010 individual awards are expected to range between $5,000 and $500,000.

Fire Research Grants Program

For the *Fire Research Grants Program*, proposals will be considered for research projects from one to three years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

For the *Fire Research Grants Program*, the annual budget is approximately $1.0 to $1.5 million. Because of commitments for the support of multi-year projects and because proposals may have been deferred from the previous year's competition, only a portion of the budget is available to fund applications received in response to this notice. For FY 2010 most grants and cooperative agreements are in the $25,000 to $125,000 per year range, with a maximum requested duration of three years. In fiscal year 2009, the *Fire Research Grants Program* funded 4 new awards totaling $337,406.

Information Technology Laboratory Grants Program

For the *Information Technology Laboratory Grants Program*, proposals will be considered for research projects from one to five years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

In fiscal year 2009, the *Information Technology Laboratory* funded 8 new awards, totaling $797,226. No funds have been set aside specifically for the *Information Technology Laboratory Grants Program.* The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by the individual divisions. The amount available each year fluctuates considerably based on programmatic needs. For FY 2010 individual awards are expected to range between $10,000 and $500,000.

NIST Center for Neutron Research (NCNR) Grants Program

The *NCNR Grants Program* will consider proposals lasting from one to five years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

In fiscal year 2009, the *NCNR Grants Program* made one award in the amount of $25,000. In fiscal year 2010, the Program anticipates funding of approximately $300,000, including new awards and continuing projects. For FY 2010 individual awards are expected to range from approximately $25,000 to $100,000 per year.

Center for Nanoscale and Science and Technology

For the *Center for Nanoscale and Science and Technology Grants and Cooperative Agreements Program*, proposals will be considered for research projects from one to five years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

In fiscal year 2009, the *CNST Grants and Cooperative Agreements Program* made no new awards. In fiscal year 2010, the CNST Grants and Cooperative Agreements Program anticipates funding of approximately $1,200,000, including new awards and continuing projects. For FY 2010 individual awards are expected to range from approximately $250,000 to $1,500,000 per year.

Technology Services Grants and Cooperative Agreements Program

For the *Technology Services Grants and Cooperative Agreements Program*, proposals will be considered for research

projects with a duration of one to three years, consistent with the multi-year funding policies described at the beginning of the "Award Information" section of this Notice.

No funds have been set aside specifically for the *Technology Services Grants and Cooperative Agreements Program.* The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by the individual divisions. The amount available each year fluctuates considerably based on programmatic needs. For FY 2010 individual awards are expected to range between $5,000 and $25,000.

c. Eligibility Information

All programs listed in this funding opportunity notice are open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.

Cost Sharing or Matching: There is no cost sharing or matching requirement for the programs listed in this funding opportunity notice.

d. Application and Submission Information

Address to Request Application Package: Complete application packages may be obtained by contacting the below named offices and personnel.

Electronics and Electrical Engineering Laboratory Grants Program

Paper applications must be submitted to: Ms. Sheilda Bryner, Electronics and Electrical Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8100, Gaithersburg, MD 20899-8100.

Manufacturing Engineering Laboratory Grants Program

Paper applications must be submitted to: Ms. Alana Glover, Manufacturing Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8200, Gaithersburg, Maryland 20899-8200.

Chemical Science and Technology Laboratory Grants Program

Paper applications must be submitted to: Ms. Donna Kimball, Chemical Science and Technology Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8300, Gaithersburg, MD 20899-8300.

Physics Laboratory Grants Program

Paper applications must be submitted to: Ms. Anita Sweigert, Physics Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8400, Gaithersburg, MD 20899-8400.

Materials Science and Engineering Laboratory Grants Program

Paper applications must be submitted to: Ms. Nancy Selepak, Materials Science and Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8500, Gaithersburg, Maryland 20899-8500.

Building Research Grants and Cooperative Agreements Program

Paper applications must be submitted to: Karen Perry, Building and Fire Research Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8602, Gaithersburg, MD 20899-8602.

Fire Research Grants Program

Paper applications must be submitted to: Ms. Wanda Duffin-Ricks, Building and Fire Research Laboratory (BFRL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8660, Gaithersburg, Maryland 20899-8660.

Information Technology Laboratory Grants Program

Paper applications must be submitted to: Gerlinde Harr, Information Technology Laboratory (ITL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8900, Gaithersburg, Maryland 20899-8900.

NIST Center for Neutron Research Grants Program

Paper applications must be submitted to: Ms. Tanya Burke, NIST Center for Neutron Research, National Institute of Standards and Technology, 100 Bureau Drive, Stop 6100, Gaithersburg, Maryland 20899-6100.

Center for Nanoscale and Science and Technology Grants and Cooperative Agreements Program

Paper applications must be submitted to: Donna Lauren, Center for Nanoscale Science and Technology, National Institute of Standards and Technology, 100 Bureau Drive, Stop 6200, Gaithersburg, Maryland 20899-6200.

Technology Services Grants and Cooperative Agreements Program

Paper applications must be submitted to: Deborah Anderson, Technology Services, National Institute of Standards and Technology, 100 Bureau Drive, Stop 2000, Gaithersburg, MD 20899-2000.

The following **applies to ALL programs** listed in this funding opportunity notice:

For electronic submission - Applicants should follow the Application Instructions provided at Grants.gov when submitting a response to this funding opportunity. Applicants are encouraged to start early and not wait to the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov.

2. Content and Form of Application Submission:

The following instructions **apply to ALL programs** listed in this funding opportunity notice.

Applicants should download and complete the package that is provided with this Federal Funding Opportunity notice.

Complete applications/proposals must include the following forms and documents:

- SF-424, Application for Federal Assistance
- SF-424A, Budget Information Non-Constructions
- SF-424B, Assurances Non-Construction
- CD-511, Certification Regarding Lobbying
- SF-LLL, Disclosure of Lobbying Activities (IF APPLICABLE)
- Technical Proposal responsive to program description(s)
- Budget Narrative

The following forms are available as part of the Grants.gov application kit and can be completed through the download application process.

SF-424, Applications for Federal Assistance
SF-424A, Budget Information Non-Construction Programs
SF-424B, Assurances Non-Construction Programs
SF-LLL, Disclosure of Lobbying Activities
CD-511, Certification Regarding Lobbying

The list of certifications and assurances referenced in item 21 of the SF-424 is contained in the SF-424B.

Proposals that are submitted without a Technical Proposal and/or a Budget Narrative will be rejected. There is no set format for the Technical Proposal and the Budget Narrative, other than that they are word-processed documents written by the applicant. The Technical Proposal should describe in depth the scope of the proposal, its goals, the methods and equipment to be used, its schedule, the personnel working on the project and their qualifications, and the institutional capabilities of the applicant. The Budget Narrative should detail the funds requested, their purposes, and the timetable for using the funds.

The applicant is responsible for ensuring that the application, whether submitted via Grants.gov or otherwise, is complete

and that it conforms to the requirements of this notice.

In order for an application to be considered complete it must meet all the application documentation requirements stated in the Federal Funding Opportunity notice.

IN AN EFFORT TO ROUTE THE APPLICATION TO THE APPROPRIATE PROGRAM OFFICIALS, APPLICANTS SHOULD INCLUDE ON THE COVER PAGE OF THE TECHNICAL PROPOSAL THE NAME OF THE GRANT AND/OR COOPERATIVE AGREEMENT PROGRAM AGAINST WHICH THEY ARE APPLYING. THE CHOICES ARE:

(1) Electronics and Electrical Engineering Laboratory (EEEL);
(2) Manufacturing Engineering Laboratory (MEL);
(3) Chemical Science and Technology Laboratory (CSTL);
(4) Physics Laboratory (PL);
(5) Materials Science and Engineering Laboratory (MSEL);
(6) Building Research Program;
(7) Fire Research Program;
(8) Information Technology Laboratory Program (ITL);
(9) NIST Center for Neutron Research (NCNR);
(10) Center for Nanoscale Science and Technology (CNST); and
(11) Technology Services (TS).

Applicants may choose to scan or create the necessary documents and then attach them to the application in Grants.gov. Applicants should carefully follow specific Grants.gov instructions to ensure the attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicating a proposal is received does not provide information about whether attachments have been received.

If you choose to apply via Grants.gov all requirements of the application must be included.

For further information or questions regarding applying electronically for the 2010-MSE-01 announcement please contact Christopher Hunton at 301-975-5718 or christopher.hunton@nist.gov .

Applicants are strongly encouraged to start early and not to wait to the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov. The Grants.gov registration process must be completed before a new registrant can apply electronically. If all goes well, the registration process takes from 3 to 5 business days. If problems are encountered, the registration process can take up to 2 weeks or more. Applicants must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number and must be registered with the Federal Central Contractor Registry and with a Credential Provider, as explained on the Grants.gov web site. After registering, it may take several days or longer from the initial log-on before a new Grants.gov system user can submit an application. Only authorized individual(s) will be able to submit the application, and the system may need time to process a submitted application. Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received, and (b) call Grants.gov directly at 800-518-4726 for immediate assistance. Assistance from the Grants.gov Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance with using the Grants.gov, you may also contact support@grants.gov.

3. Submission Dates and Times:

For all NIST Measurement Science and Engineering (MSE) Research Grants and Cooperative Agreements Programs except the Fire Research Grants Program, applications will be considered on a continuing basis. Applications received after June 1, 2010 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. All applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2011 solicitation for the NIST MSE Grants Program in order to be processed under this solicitation.

For the Fire Research Grants Program, applications received after January 15, 2010 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds.

4. Intergovernmental Review: Executive Order 12372: Applications under this program are not subject to Executive Order 12372, ``Intergovernmental Review of Federal Programs."

5. Funding Restrictions: Not applicable.

6. Other Submission Requirements: None

e. Application Review Information

1. Criteria:

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of electronics and electrical engineering and metrology research. Proposals must be relevant to current EEEL research and have a relation to the objectives of ongoing EEEL programs and act ivies.

3. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

4. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

Each of these factors will be given equal weight in the evaluation process.

Manufacturing Engineering Laboratory Grants Program

For the *MEL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of manufacturing engineering and metrology research. Proposals must be relevant to current MEL research and have a relation to the objectives of ongoing MEL programs and activities.

3. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

4. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

Each of these factors will be given equal weight in the evaluation process.

Chemical Science and Technology Laboratory Grants Program

For the *Chemical Science and Technology Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of measurement science, especially as it pertains to reference methods, reference materials and reference data in Chemical Science and Technology.

Each of these factors will be given equal weight in the evaluation process.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues that are relevant to Physics Laboratory programs.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of physics.

Each of these factors will be given equal weight in the evaluation process.

Materials Science Engineering Laboratory Grants Program

For the *MSEL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of materials science and engineering. Proposals must be relevant to current MSEL research and have a relation to the objectives of ongoing MSEL programs and activities.

Each of these factors will be given equal weight in the evaluation process.

Building Research Grants and Cooperative Agreements Program

The Divisions of the Building and Fire Research Laboratory will score proposals based on the following criteria and weights:

1. Technical quality of the research. Reviewers will assess the rationality, innovation and imagination of the

proposal and the fit to NIST's in-house building research programs. (0 – 35 points);

2. Potential impact of the results. Reviewers will assess the potential impact and the likelihood of the technical application of the results. (0 – 25 points);

3. Staff and institution capability to do the work. Reviewers will evaluate the quality of the facilities and experience of the staff to assess the likelihood of achieving the objective of the proposal. (0 – 20 points);

4. Match of budget to proposed work. Reviewers will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 – 20 points).

Fire Research Grants Program

For the *Fire Research Grants Program*, the technical evaluation criteria are as follows:

1. Technical quality of the research. Reviewers will assess the clarity, rationality, organization and innovation of the proposed work. (0 - 40 points);

2. Potential impact of the results. Reviewers will assess the potential impact and the likelihood of the technical application of the results to address aspects of the national fire problem. (0 - 40 points);

3. Staff and institution capability to do the work. Reviewers will evaluate the quality of the facilities and experience of the staff to assess the likelihood of achieving the objective of the proposal. (0 - 10 points);

4. Match of budget to proposed work. Reviewers will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 - 10 points).

Information Technology Laboratory Grants Program

For the *ITL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of information technology research.

3. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

4. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

Each of these factors will be given equal weight in the evaluation process.

NIST Center for Neutron Research Grants Program

The *NCNR Grants Program* evaluation criteria that the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will assess the innovation, rationality, and coherence of the applicant's approach and the extent to which the proposal effectively addresses important scientific and technical issues using neutron methods and/or the development of innovative devices for neutron research. (0 to 35 points)

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project. (0 to 20 points)

3. Resources. Reviewers will consider the extent to which the proposer has access to the necessary resources,

facilities, and overall support to accomplish project objectives, and will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 to 20 points)

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to neutron research. (0 to 25 points)

Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program

For the *Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program*, the technical reviewers will use the following evaluation criteria in evaluating the proposals:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in this project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of nanotechnology.

All factors will be weighted equally.

Technology Services Grants and Cooperative Agreements Program

For the *Technology Services Grants and Cooperative Agreements Program*, the technical reviewers will score proposals based on the following criteria and weights:

1. Technical quality of the research. Reviewers will assess the rationality, innovation and imagination of the proposal and the fit to NIST's documentary standards and legal metrology programs. (0 – 35 points);

2. Potential impact of the results. Reviewers will assess the potential impact and the technical application of the results to NIST's in-house programs and the documentary standards and legal metrology communities. (0 – 25 points);

3. Staff and institution capability to do the work. Reviewers will evaluate the quality of the facilities and experience of the staff to assess the likelihood of achieving the objective of the proposal. (0 – 20 points);

4. Match of budget to proposed work. Reviewers will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 – 20 points).

2. Review and Selection Process:

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, proposals will be reviewed in a three-step process. First, the EEEL Grants Coordinator, or the Deputy Director of EEEL, will determine the compatibility of the applicant's proposal with EEEL Program Areas and the relevance to the objectives of the *Electronics and Electrical Engineering Laboratory Grants Program*, described in the Program Description section above. If it is determined that the proposal is incomplete or nonresponsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. If it is determined that sufficient funding is not available to consider grant and cooperative agreement proposals in the technical area of the proposal, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. Proposers may contact EEEL at 301-975-2959 to find out if funds have been exhausted for the fiscal year. EEEL will also post a notice on its web site, http://www.eeel.nist.gov/eeel_grants/, when funds are exhausted for the fiscal year. EEEL will notify proposers in writing if their proposals are not reviewed for technical merit.

Second, proposals will be distributed for technical review by the EEEL Grants Coordinator, or other technical professionals

familiar with the programs of the Electronics and Electrical Engineering Laboratory, to the appropriate Division or Office based on technical area. At least three independent, objective individuals knowledgeable about the particular scientific area addressed by the proposal will conduct a technical review based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Reviews will be conducted on a monthly basis, and all proposals received on or before the 15th day of the month will be ranked based on the reviewers' scores.

Third, the Division Chief or Office Director will make application selections. In making application selections, the Division Chief or Office Director will take into consideration the results of the reviewers' evaluations, the availability of funding, and relevance to the objectives of the *Electronics and Electrical Engineering Laboratory Grants Program*, as described in the Program Description section above. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Manufacturing Engineering Laboratory Grants Program

For the *MEL Grants Program* responsive proposals will be assigned, as received on a rolling basis, to the most appropriate area for review. Proposals will be reviewed on a rolling basis in a three-step process. First, the MEL Deputy Director or the appropriate MEL Division Chief will determine the applicability of the proposal with regard to MEL programs and the relevance of the proposal's objectives to current MEL research. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and any remaining copies will be destroyed. Second, the appropriate MEL Division Chief or MEL Program Manager will determine the possibility for funding availability within the MEL technical program area most relevant to the objectives of the proposal. If it is determined that sufficient funding is not available to consider grant and cooperative agreement proposals in the technical area of the proposal, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. Proposers may contact MEL at 301-975-3400 to find out if funds have been exhausted for the fiscal year. MEL will also post a notice on its web site, http://www.mel.nist.gov when funds are exhausted for the fiscal year. MEL will notify proposers in writing if their proposals are not reviewed for technical merit. Third, if the proposal passes the first two steps, at least three independent, objective individuals knowledgeable about the particular scientific area addressed by the proposal will conduct a technical review based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposal with each other, but scores will be determined on an individual basis, not as a consensus.

The MEL Director or appropriate MEL Division Chief will make application selections from the grants proposals submitted. In making the application selections, the Laboratory Director or Division Chief will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives of the *MEL Grants Program.* These objectives are described above in the Program Description section.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Chemical Science and Technology Laboratory Grants Program

For the *Chemical Science and Technology Laboratory Grants Program*, proposals will be reviewed in a three-step process. First, the CSTL Grants Coordinator, the Deputy Director of CSTL, or the corresponding CSTL Division Chief, will determine the compatibility of the applicant's proposal with CSTL Program Areas and the relevance to the objectives of the

Chemical Science and Technology Laboratory Grants Program, described in the Program Description section above. If it is determined that the proposal is incomplete or nonresponsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed.

Second, at least three independent, objective individuals knowledgeable about the particular measurement science area addressed by the proposal will conduct a technical review based on the evaluation criteria. Reviews will be conducted on a quarterly basis, subject to the availability of funds, and all responsive, complete proposals received and reviewed since the last quarter will be ranked based on the reviewers' scores. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Third, the Division Chief or the CSTL Deputy Director, generally after collaboration, will make application selections, taking into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives described in the Program Description section above.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, whether the application furthers the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, responsive proposals will be considered as follows: If a preliminary review determines that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. All applications that are complete and responsive to the solicitation will be reviewed for technical merit.

First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the proposal will conduct a technical review of each proposal, based on the evaluation criteria listed in the Evaluation Criteria section above. Reviews will be conducted on a monthly basis within each division of the Physics Laboratory, and all proposals received during the month will be ranked based on the reviewers' scores. If non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Next, the Division Chief will make final application selections, taking into consideration the results of the reviewers' evaluations, including rank; the compilation of a slate that, when taken as a whole, is likely to best further the program interests described in the Program Description section above; and the availability of funds. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible.

Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award.

The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Materials Science and Engineering Laboratory Grants Program

Review and Selection Process: For the *MSEL Grants Program* proposals will be reviewed in a two-step process. If a preliminary review determines that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping

purposes for three years and all remaining copies will be destroyed. All applications that are complete and responsive to the solicitation will be reviewed for technical merit. First, at least three independent, objective individuals knowledgeable in the particular scientific area addressed by the proposal will conduct a technical review. Proposals are received and will be reviewed on a rolling basis based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Second, the Division Chief or Laboratory Deputy Director will make application selections. In making application selections, the Division Chief or Laboratory Deputy Director will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives described in the Program Description section of the FFO. For conferences, workshops or other technical meetings, the Division Chief or Laboratory Director will also take into consideration whether they align with ongoing MSEL programmatic activities. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record-keeping purposes. The remaining copies will be destroyed.

Building Research Grants and Cooperative Agreements Program

For the *Building Research Grants and Cooperative Agreements Program* proposals will be reviewed in a two-step process. If a preliminary review determines that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. All applications that are complete and responsive to the solicitation will be reviewed for technical merit. First, at least three independent, objective individuals knowledgeable in the particular scientific area addressed by the proposal will conduct a technical review. Proposals are received and will be reviewed on a rolling basis based on the evaluation criteria listed in the Evaluation Criteria section above. If non-federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Second, the Division Chief or Laboratory Director or Deputy Director will take into consideration the results of the reviewers' evaluation, the availability of funds, and relevance to the objectives described in the Program Description section of this FFO.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The award decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Fire Research Grants Program

Prospective proposers are encouraged to contact the group leaders listed in the Program Description section of this FFO announcement to determine the responsiveness of the proposal and compliance with program objectives prior to preparation of a detailed proposal; however, written pre-proposals and white papers are not solicited and will not be reviewed for other than informational purposes. Responsive proposals will be assigned to the most appropriate group and reviewed as received on a rolling basis. If it is determined that the proposal is incomplete or nonresponsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. Proposals are evaluated for technical merit based on the evaluation criteria described above by at least three reviewers chosen from NIST professionals, technical experts from other interested government agencies, and experts from the fire research community at large. When non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

A Review Panel, consisting of group leaders and the Deputy Division Chief, will make funding recommendations to the Selecting Official (the Fire Research Division Chief). In making recommendations for application selections, the Review Panel and the Selecting Official will consider the results of the reviewers' evaluations, the scores of the reviewers, the availability of funds, program balance, and the relevance to the objectives of the *Fire Research Grants Program*, as described in the Program Description section above and at the Building and Fire Research Laboratory web site at http://www.bfrl.nist.gov.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The award decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

Proposals submitted to another agency will be considered for possible joint funding if approved by the other agency.

Initial review of the proposal will consider completeness and responsiveness of the proposal to the program requirements. Proposals on product development and commercialization are not considered responsive to this solicitation.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Information Technology Laboratory Grants Program

For the *Information Technology Laboratory (ITL) Grants Program*, proposals will be reviewed in a three-step process. First, the ITL Grants Coordinator, the Deputy Director of ITL, or the corresponding Division Chief will determine the compatibility of the applicant's proposal with ITL program areas and the relevance to the objectives of the *ITL Grants Program*, described in the Program Description section above. If a proposal is determined to be incomplete or non-responsive, or if it is determined that all available funds have been exhausted, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. Proposers may contact ITL at 301-975-2901 to find out if funds have been exhausted for the fiscal year. ITL will also post a notice on its web site, www.itl.nist.gov, when funds are exhausted for the fiscal year. ITL will notify proposers in writing if their proposals are not reviewed for technical merit.

Second, at least three independent, objective individuals knowledgeable about the particular measurement science area addressed by the proposal will conduct a technical review based on the published evaluation criteria. Reviews will be conducted on a rolling basis as proposals are received. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Third, the Division Chief, in accord with the Director of ITL, will make application selections, taking into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives described in the Program Description section above.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

NIST Center for Neutron Research Grants Program

Proposals submitted to the *NCNR Grants Program* will be reviewed in a two-step process. If a preliminary review determines that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. All applications that are complete and responsive to the solicitation will be reviewed for technical merit.

First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the Program Description section above that the proposal addresses will conduct a technical review of proposals, as they are received on a rolling basis, based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Second, the Center Director will make application selections. In making application selections, the Center Director will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives of the *NCNR Grants Program*, described above in the Program Description section. The final approval of selected applications and award of

financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets, and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program

For the *Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program*, responsive proposals will be assigned, as received on a rolling basis, to the most appropriate area for review. Proposals will be reviewed on a rolling basis in a two-step process. First, the CNST Deputy Director will determine the applicability of the proposal with regard to CNST programs and the relevance of the proposal's objectives to current CNST research. If it is determined that the proposal is incomplete or nonresponsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. CNST will notify proposers in writing if their proposals are not reviewed for technical merit. Second, if the proposal passes the first step, at least three independent, objective individuals knowledgeable about the particular scientific area addressed by the proposal will conduct a technical review based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposal with each other, but scores will be determined on an individual basis, not as a consensus.

The CNST Director will make application selections from the grants and cooperative agreement proposals submitted. In making the application selections, the CNST Director will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives of the *CNST Grants and Cooperative Agreements Program.* These objectives are described above in the Program Description section.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Technology Services Grants and Cooperative Agreements Program

For the *Technology Services Grants and Cooperative Agreements Program* proposals will be reviewed in a two-step process. If a preliminary review determines that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. One copy of any such proposal will be retained for record keeping purposes for three years and all remaining copies will be destroyed. All applications that are complete and responsive to the solicitation will be reviewed for technical merit. First, at least three independent and objective individuals knowledgeable in the particular area addressed by the proposal will conduct a technical review. Proposals are received and will be reviewed on a rolling basis based on the evaluation criteria listed in the Evaluation Criteria section above. If non-federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Second, the Division Chief or OU Director or OU Deputy Director will make funding recommendations, taking into consideration the results of the reviewers' evaluation, the availability of funds, and relevance to the objectives described in the Program Description section of this FFO.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The award decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

3. Anticipated Announcement and Award Dates: Awards will be made approximately 90 days after the end of the review cycle. See information in the Dates section regarding awards made in a subsequent fiscal year.

f. Award Administration Information

1. Award Notices: Successful finalists will receive a grant or cooperative agreement award document from the Grant Officer. The document will be mailed via surface mail in triplicate. The recipient should have an authorized official at the organization sign and return two copies to the address listed in the award document. The award document will also include the standard terms and conditions, general terms and conditions (if any), and special award conditions (if any) that are applicable.

2. Administrative and National Policy Requirements:

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements: The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements, which are contained in the Federal Register Notice of February 11, 2008 (73 Fed. Reg. 7696), are applicable to this notice On the form SF-424 items 8.b. and 8.c., the applicant's 9-digit Employer/Taxpayer Identification Number (EIN/TIN) and 9-digit Dun and Bradstreet Data Universal Numbering System (DUNS) number must be consistent with the information on the Central Contractor Registration (CCR) (www.ccr.gov) and Automated Standard Application for Payment System (ASAP). For complex organizations with multiple EIN/TIN and DUNS numbers, the EIN/TIN and DUNS numbers MUST be the numbers for the applying organization. Organizations that provide incorrect/inconsistent EIN/TIN and DUNS numbers may experience significant delays in receiving funds if their proposal is selected for funding. Please confirm that the EIN/TIN and DUNS number are consistent with the information on the CCR and ASAP.

Collaborations with NIST Employees: All applications should include a description of any work proposed to be performed by an entity other than the applicant, and the cost of such work should ordinarily be included in the budget.

If an applicant proposes collaboration with NIST, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved, if known. Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the proposal prior to the merit review.

Use of NIST Intellectual Property: If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described at 35 U.S.C. §§200-212, 37 C.F.R. part 401, 15 C.F.R. §14.36, and in Section B.21 of the Department of Commerce Pre-Award Notification Requirements, 73 Fed. Reg. 7696 (Feb. 11, 2008). Questions about these requirements may be directed to the Chief Counsel for NIST, 301-975-2803.

Any use of NIST-owned intellectual property by a proposer is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this notice, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

Initial Screening of all Applications: All applications received in response to this announcement will be reviewed to determine whether or not they are complete and responsive to the scope of the stated program objectives. Incomplete or non-responsive applications will not be reviewed for technical merit. The Program will retain one copy of each non-responsive application for three years for record keeping purposes. The remaining copies will be destroyed.

Additional Consideration of Applications: NIST programs are often cross-cutting and multi-disciplinary. If a NIST program official believes an application that is not selected for funding may be of interest to another NIST program(s), the official may forward the

application to any other NIST program(s) that the program official believes may have an interest in the project, for potential consideration under the other NIST program(s) procedures. If, upon initial screening, the other NIST program(s) finds the application may be of programmatic interest, the application will proceed through the review and selection procedures described in this Notice for the program(s). If not, the application will be returned to the original program for final processing. Any applicant that does not wish for its application to be considered by other NIST programs should indicate on its application that it would like consideration of the project to be limited to the program to which it originally submitted the application. Applicants will be notified if their applications have been forwarded to another NIST program(s) for potential consideration.

Research Projects Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects: Any proposal that includes research involving human subjects, human tissue, data or recordings involving human subjects must meet the requirements of the Common Rule for the Protection of Human Subjects (Common Rule), codified for the Department of Commerce at 15 C.F.R. Part 27. In addition, any proposal that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Presidential statements of policy on these topics. NIST will accept the submission of human subjects protocols that have been approved by Institutional Review Boards (IRBs) possessing a current registration filed with DHHS and to be performed by institutions possessing a current, valid Federal-wide Assurance (FWA) from DHHS. NIST will not issue a single project assurance (SPA) for any IRB reviewing any human subjects protocol proposed to NIST.

President Obama has issued Executive Order No. 13,505 (74 FR. 10667, March 9, 2009), revoking previous Executive Orders and Presidential statements regarding the use of human embryonic stem cells in research. On July 30, 2009, President Obama issued a memorandum directing that agencies that support and conduct stem cell research adopt the "National Institutes of Health Guidelines for Human Stem Cell Research" (NIH Guidelines), which became effective on July 7, 2009, "to the fullest extent practicable in light of legal authorities and obligations." On September 21, 2009, the Department of Commerce submitted to the Office of Management and Budget a statement of compliance with the NIH Guidelines. In accordance with the President's memorandum, the NIH Guidelines, and the Department of Commerce statement of compliance, NIST will support and conduct research using only human embryonic stem cell lines that have been approved by NIH in accordance with the NIH Guidelines and will review such research in accordance with the Common Rule, as appropriate. NIST will not support or conduct any type of research that the NIH Guidelines prohibit NIH from funding. NIST will follow any additional polices or guidance issued by the current Administration on this topic.

Research Projects Involving Vertebrate Animals: Any proposal that includes research involving vertebrate animals must be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals" which can be obtained from National Academy Press, 2101 Constitution Avenue, NW., Washington, DC 20055. In addition, such proposals must meet the requirements of the Animal Welfare Act (7 U.S.C. §2131 et seq.), 9 C.F.R. Parts 1, 2, and 3, and if appropriate, 21 C.F.R. Part 58. These regulations do not apply to proposed research using pre-existing images of animals or to research plans that do not include live animals that are being cared for, euthanized, or used by the project participants to accomplish research goals, teaching, or testing. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks.

Limitation of Liability:
Funding for the programs listed in this notice is contingent upon the availability of Fiscal Year 2010 appropriations. NIST issues this notice subject to the appropriations made available under the current continuing resolution, H.R. 2918, "Continuing Appropriations Resolution, 2010," Public Law 111-68, as amended by H.R. 2996, "Further Continuing Appropriations, 2010," Public Law 111-88. NIST anticipates making awards for the programs listed in this notice provided that funding for the programs is continued beyond December 18, 2009, the expiration of the current continuing resolution. In no event will NIST or the Department of Commerce be responsible for proposal preparation costs if these programs fail to receive funding or are cancelled because of agency priorities. Publication of this announcement does not oblige NIST or the Department of Commerce to award any specific project or to obligate any available funds.

Collaborations making use of Federal Facilities: All applications should include a description of any work proposed to be performed using Federal Facilities.

If an applicant proposes use of NIST facilities, the statement of work should include a statement of this intention and a description of the facilities. Any use of NIST facilities must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the availability of the facilities and approval of the proposed usage. Any unapproved facility use will be stricken from the proposal prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the NIST Technology Services web site, http://ts.nist.gov/.

Reporting: Successful finalists will be required to submit, on a semi-annual basis, for the periods ending March 31 and September 30 of each year, a technical progress report and a SF-269, Financial Status Report. From time to time, and in accordance with the Uniform Administrative Requirements and other terms and conditions governing the award, the recipient may need to submit property and patent reports.

For the *Fire Research Grants Program*, in addition to semi-annual progress reports, an annual project description will be requested for all grants and cooperative agreements. The project description will be due in September 2010 (or one month after the initiation of the grant, if the start date is after September 2010.) A template for the project description will be available from Ms. Wanda Duffin-Ricks (Email: wanda.duffin@nist.gov; Tel: 301-975-6863). In addition, a final report describing the technical results of the grant or cooperative agreement at the conclusion of the award period is required 90 days after the conclusion of the award period. The final report should include a list, if appropriate, of the names of students for whom the grant support a portion of their work toward an advanced degree. The date and name of the degree should also be listed.

g. Agency Contact(s):

Electronics and Electrical Engineering Laboratory Grants Program

Program questions should be addressed to Sheilda Bryner, Electronics and Electrical Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8100, Gaithersburg, MD 20899-8100, Tel.: (301) 975-2959, Fax: (301) 975-4091.

Manufacturing Engineering Laboratory Grants Program

Program questions should be addressed to Ms. Alana Glover, Manufacturing Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8200, Gaithersburg, Maryland 20899-8200, Tel: (301) 975-3400, E-mail: aglover@nist.gov.

Chemical Science and Technology Laboratory Grants Program

Program questions should be addressed to Ms. Donna Kimball, Chemical Science and Technology Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8300, Gaithersburg, MD 20899-8300, Tel (301) 975-8300, E-Mail: donna.kimball@nist.gov.

Physics Laboratory Grants Program

Program questions should be addressed to Ms. Anita Sweigert, Physics Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8400, Gaithersburg, MD 20899-8400, Tel (301) 975-4200, E-Mail: anita.sweigert@nist.gov. It is strongly suggested to first confirm the program objectives with the Program Manager prior to preparing a detailed proposal.

Materials Science and Engineering Laboratory Grants Program

Program questions should be addressed to Ms. Nancy Selepak, Materials Science and Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8500, Gaithersburg, Maryland 20899-8500, Tel: (301) 975-2047 E-mail: nancy.selepak@nist.gov.

Building Research Grants and Cooperative Agreements Program

Program questions should be addressed to Karen Perry, Building and Fire Research Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8602, Gaithersburg, MD 20899-8602, Tel.: (301) 975-5910, karen.perry@nist.gov , Fax: (301) 975-4032, and web site http://www.bfrl.nist.gov.

Fire Research Grants Program

Program questions should be addressed to Ms. Wanda Duffin-Ricks, Building and Fire Research Laboratory (BFRL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8660, Gaithersburg, Maryland 20899-8660, Tel: (301) 975-6863, E-mail: wanda.duffin@nist.gov , Website: http://www.bfrl.nist.gov.

Information Technology Laboratory Grants Program

Program questions should be addressed to Gerlinde Harr, Information Technology Laboratory (ITL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8900, Gaithersburg, MD 20899-8900, Tel.: (301) 975-2901, gharr@nist.gov, Fax: (301) 975-2378, website: http://www.itl.nist.gov . It is strongly suggested to first confirm the program objectives with the Program Manager prior to preparing a detailed proposal.

NIST Center for Neutron Research Grants Program

Program questions should be addressed to Dr. Dan Neumann, NIST Center for Neutron Research, National Institute of Standards and Technology, 100 Bureau Drive, Stop 6102, Gaithersburg, Maryland 20899-6102, Tel: (301) 975-5252, E-mail: dan.neumann@nist.gov.

Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program

Program questions should be addressed to Donna Lauren, Center for Nanoscale Science and Technology, National Institute of Standards and Technology, 100 Bureau Drive, Stop 6200, Gaithersburg, Maryland 20899-6200. Tel (301) 975-3729, E-Mail: donna.lauren@nist.gov.

Technology Services Grants and Cooperative Agreements Program

Program questions should be addressed to Deborah Anderson, Technology Services, National Institute of Standards and Technology, 100 Bureau Drive, Stop 2000, Gaithersburg, MD 20899-2000, Tel.: (301) 975-5654, deborah.anderson @nist.gov , Fax: (301) 975-2183, and web site http://www.ts.nist.gov.

The following applies to ALL programs listed in this funding opportunity notice:

Grants administration questions concerning this program should be addressed to: Christopher Hunton, NIST Grants and Agreements Management Division, (301) 975-5718; christopher.hunton@nist.gov . For assistance with using Grants.gov contact support@grants.gov or (800) 518-4726.